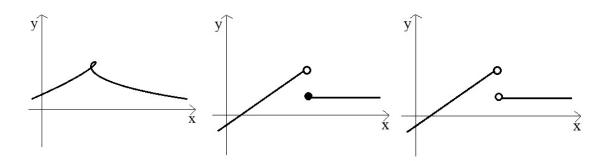
Math 115

Worksheet Section 1.1

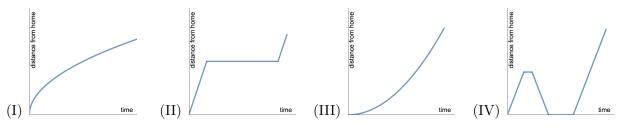
1. 1. Which of the following objects represent functions?

the rule that sends every non-zero number to its square and sends 0 to 1 the rule that sends every number to 42



x	y	x - y	$y = x^2$
1	5	1 5	
1	2	2 3	
2	3	3 3	
3	4	4 1	$x^2 + y^2 = 1$

- 2. So what exactly is a **function**?
- 2. Which graph best matches each of the following stories? Write a story for the remaining graph.
 - (a) I had just left home when I realized I had forgotten my books, so I went back to pick them up.
 - (b) Things went fine until I had a flat tire.
 - (c) I started out calmly but sped up when I realized I was going to be late.



- 3. Residents in the town of Maple Grove who are connected to the municipal water supply are billed a fixed amount monthly plus a charge for each cubic foot of water used. A household using 1000 cubic feet was billed \$40, while one using 1600 cubic feet was billed \$55.
 - (a) What is the charge per cubic foot?
 - (b) Write an equation for the total cost of a resident's water as a function of cubit feet of water used.
 - (c) How many cubic feet of water would lead to a bill of \$100?

4. Match the graphs in the figure with the following equations. (Note that the x and y scales may be unequal.)

(a)
$$y = -2.27x$$

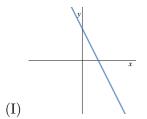
(d)
$$y = 0.1x - 27.9$$

(b)
$$y = 20.01 + 1.01x$$

(e)
$$y = -5.7 - 200x$$

(c)
$$y = 27.9 - 0.1x$$

(f)
$$y = x/3.14$$





(II)

